

Listing of the Claims:

Claim 1 (Currently Amended): Apparatus for ascertaining the transverse dimensions of at least one at least substantially rod-shaped article while the article is maintained in a predetermined position, comprising a plurality of measuring arrangements for simultaneously ascertaining the transverse dimensions of a plurality of rod-shaped articles each of which is maintained in a pre-determined position relative to the respective measuring arrangement, at least one each measuring arrangement ~~which~~ includes:

at least one radiation source arranged to direct a variable-orientation beam of radiation against the at least one article occupying said predetermined position whereby the article intercepts a portion of the beam which is indicative of a transverse dimension of the article;

a device for generating on the basis of the thus influenced beam of radiation signals denoting the transverse dimensions of the at least one article in plural orientations of the at least one article and the beam relative to each other; and

means for selectively altering the orientation of the beam and the at least one article relative to each other wherein said measuring arrangements are adjacent each other and said altering means of each of said measuring arrangements include means for synchronously altering the orientation of beams generated by the radiation sources of said plurality of measuring arrangements.

Claim 2 (Original): The apparatus of claim 1, wherein the at least one article forms part of or constitutes a smokers' product.

Claim 3 (Original): The apparatus of claim 1, wherein said at least one measuring arrangement comprises at least one optical element.

Claim 4 (Original): The apparatus of claim 1, wherein said at least one radiation source is arranged to direct short-lasting beams of radiation against the at least one article occupying said predetermined position.

Claim 5 (Original): The apparatus of claim 1, further comprising means for maintaining the at least one article at a standstill during exposure to the beam of radiation.

Claim 6 (Original): The apparatus of claim 1, further comprising means for moving the at least one article during exposure to the beam of radiation.

Claim 7 (Original): The apparatus of claim 1, wherein said altering means includes means for moving one of the at least one article and the beam relative to the other thereof.

Claim 8 (Original): The apparatus of claim 1, wherein said radiation source is arranged to direct a beam at least substantially at right angles to a longitudinal axis of the article in said predetermined position.

Claim 9 (Original): The apparatus of claim 1, wherein said altering means includes means for turning the beam about an axis which is at least substantially parallel to a longitudinal axis of the article in said predetermined position.

Claim 10 (Original): The apparatus of claim 1, wherein said altering means includes means for turning the beam about an axis which coincides with a longitudinal axis of the article in said predetermined position.

Claim 11 (Original): The apparatus of claim 1, further comprising means for evaluating said signals and for generating output signals denoting averaged transverse dimensions of the article.

Claim 12 (Original): The apparatus of claim 1, wherein said orientation altering means comprises means for moving the beam relative to the at least one article.

Claim 13 (Original): The apparatus of claim 12, wherein said moving means is arranged to move the beam relative to a point within the at least one article in said predetermined position.

Claim 14 (Canceled).

Claim 15 (Currently Amended): The apparatus of claim ~~14~~ 1, wherein the number of said measuring arrangements is two.

Claim 16 (Currently Amended): The apparatus of claim ~~14~~ 1, wherein said means for synchronously altering the orientation of said beams includes mobile components of said measuring arrangements and means for moving said mobile components in synchronism

with each other relative to points located within the confines of articles assuming said predetermined positions relative to the respective measuring arrangements.

Claim 17 (Original): The apparatus of claim 16, wherein said moving means is arranged to move said mobile components relative to points located within the confines of the respective articles.

Claim 18 (Original): The apparatus of claim 17 for ascertaining the transverse dimensions of rod-shaped articles having longitudinal axes, wherein said points are located at least close to the axes of the respective articles.

Claim 19 (Original): The apparatus of claim 17 for ascertaining the transverse dimensions of rod-shaped articles having longitudinal axes, wherein said points are located in planes which are inclined relative to the axes of the respective articles.

Claim 20 (Original): The apparatus of claim 18, wherein said altering means of each of said measuring arrangements includes means for altering the orientation of said beams through angles of at least close to 180°.

Claim 21 (Currently Amended): The apparatus of claim ~~14~~ 1, wherein the number of said measuring arrangements is two and said two measuring arrangements are adjacent each other, said means for synchronously altering the orientation of said beams having means for moving said beams in opposite directions.

Claim 22 (Original): The apparatus of claim 21, wherein said means for simultaneously altering the orientation of said beams is arranged to move each of the beams between two end positions in each of which said measuring arrangements are disposed at least substantially opposite each other.

Claim 23 (Original): The apparatus of claim 22, wherein each of said measuring arrangements comprises a housing having a longer section and a shorter section, said longer section of at least one of said housings being turnable away from the measuring arrangement embodying the other of said housings.

Claim 24 (Currently Amended): A method of simultaneously ascertaining the transverse dimensions of plural articles including at least one rod-shaped article while the ~~article is~~ articles are maintained in a predetermined position positions, comprising the steps of:

directing a discrete variable-orientation beam of radiation against each of the plural articles ~~at least one article~~ occupying said position positions whereby ~~the each~~ article intercepts a portion of the respective beam which is indicative of a transverse dimension of the respective article;

repeatedly altering the orientation of the respective beam and respective ones of the at least one article plural articles relative to each other where the orientation altering step jointly moves respective discrete beams relative to the respective articles;

evaluating the non-intercepted portion of the respective beam in each orientation of the beam and of the respective ones of the plural articles ~~at least one article~~ relative to each other; and

generating on the basis of evaluated radiation signals denoting the respective transverse dimensions of a respective one of the plural articles ~~the article~~.

Claim 25 (Original): The method of claim 24, wherein the at least one rod-shaped article forms part of or constitutes a smokers' product.

Claim 26 (Original): The method of claim 24, wherein said radiation is optical radiation.

Claim 27 (Original): The method of claim 24, wherein said directing step includes directing a short-lasting beam of radiation against the at least one article occupying said position.

Claim 28 (Original): The method of claim 24, wherein said altering step includes selectively changing the orientation of the beam relative to the at least one article.

Claim 29 (Original): The method of claim 24, further comprising the step of processing said signals into signals denoting the average transverse dimensions of the articles.

Claim 30 (Original): The method of claim 24, wherein said orientation altering step includes moving the beam relative to a point within the at least one article occupying said predetermined position.

Claim 31 (Original): The method of claim 30, wherein the beam is supplied by source of

radiation and said moving step includes turning the radiation source relative to said point.

Claim 32 (Original): The method of claim 31, wherein the source forms part of a measuring arrangement and said moving step includes turning at least a portion of the measuring arrangement relative to said point, said point being located in a plane which is inclined relative to a longitudinal axis of the article occupying said predetermined position.

Claim 33 (Original): The method of claim 30, wherein said point is located in a plane which is inclined relative to a longitudinal axis of the article occupying said predetermined position.

Claim 34 (Original): The method of claim 30, wherein said moving step includes turning the beam relative to said point through an angle at least approximating 180° .

Claim 35 (Original): The method of claim 24, wherein said directing step includes orienting the beam to impinge upon the article occupying said predetermined position at least substantially at right angles to a longitudinal axis of the article.

Claim 36 (Original): The method of claim 24, wherein said orientation altering step includes moving the beam relative to the article about one of two axes one of which is at least substantially parallel to and the other of which coincides with a longitudinal axis of the article occupying said predetermined position.

Claim 37 (Original): The method of claim 24, wherein said directing step is carried out by a radiation source in a housing of a measuring arrangement and said orientation altering step includes moving at least a portion of the measuring arrangement between a plurality of positions relative to the at least one rod-shaped article occupying said predetermined position.

Claim 38 (Original): The method of claim 37, wherein said directing step includes short-lasting exposure of the article to radiation in each of said plurality of positions of said portion of the measuring arrangement.

Claim 39 (Canceled).

Claim 40 (Currently Amended): The method of claim ~~39~~ 24, wherein said orientation altering step includes moving said discrete beams in synchronism with each other.

Claim 41 (Currently Amended): The method of claim ~~39~~ 24, wherein said orientation changing step includes moving the beam for one of said plural articles in a first direction and moving the beam for another of said plural articles in a second direction at least substantially counter to said first direction.

Claim 42 (Currently Amended): The method of claim ~~39~~ 24, wherein the plural articles include first and second articles located close to each other and said orientation altering step includes turning the beams for the first and second articles between two end

positions in each of which the beam for one of the first and second articles is located opposite the beam for the other of the first and second articles.

Claim 43 (Original): The method of claim 42, wherein the beams for the first and second articles are furnished by discrete first and second measuring arrangements having housings including shorter and longer sections, the longer section of each of the housings being arranged to turn away from the other measuring arrangement in response to turning of the respective beams to selected end positions thereof.

Claim 44 (Original): The apparatus of claim 19, wherein said altering means of each of said measuring arrangements includes means for altering the orientation of said beams through angles of at least close to 180°.